Lecture 6 :obesity

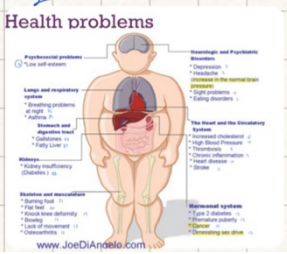
- Obesity is defined by BMI

	International	Asia-Pacific
Normal	18.5-24.9	18.5-22.9
Overweight	25-29.9	23-24.9
Class I obesity	30-34.9	25-29.9
Class II obesity	35-39.9	≥30
Class III obesity	≥40	

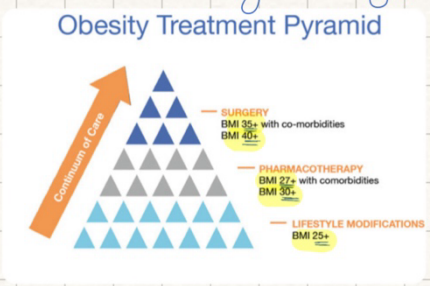
we define morbid obese by:

International	Asia-Pacific
BMI ≥ 40	BMI ≥ 37
BMI ≥ 35 with severe obesity-related morbidities	BMI ≥ 32 plus **Type 2 Diabetes** or two obesity-related co-morbidities

↳ what are the comorbidites?



- How to manage obesity?



- Indications for Surgery?

International	Asia-pacific
BMI >40	BMI >35
BMI >35 with co-morbidities	BMI > 32 with co-morbidities
Failed less invasive methods and at high risk for obesity-associated morbidity and mortality	BMI > 30 and central obesity with at least two criteria for metabolic syndrome

Co-morbidities: HT, IGT, DM, hyperlipidemia, OSA
Metabolic syndrome: HTN, DM, raised TG, reduced HDL cholesterol

- what is the difference between surgical and non surgical? Surgery has better results in weight loss and reduction of comorbidites but it's associated with more complications and mortality

Surgeries in <u>Bariatrics</u>:

🔴 **Restrictive Surgery** ➡️ Involves creating a **smaller gastric pouch** to promote **early satiety** and **reduced oral intake**

🔹 **1. Balloon**

- **Endoscopic procedure**
- Decreases gastric space and **stays for 6 months**
- Creates a feeling of **fullness**
- May be used **pre-surgery**

Side Effects:

1. **Nausea & vomiting** (common post-op) → stays for a week after surgery
   → Sometimes needs **antiemetics**
2. **Dehydration** from GI upset and reduced intake
   → **May require hospitalization**
3. **Balloon deflation** (<5%)
   → uncommon if removed after 6 months , but if it occurs, may **cause obstruction** requiring **surgical removal**

🔹 **2. Gastric Band**

- Band placed around the **fundus**
- Safest procedure in bariatric surgery
- ✅ Reversible & adjustable
- 💡 Produces **less weight loss**

Pros:

- Simple , safe
- Reversible
- Fast recovery and short hospitalization

Cons:

- Risk of **erosion, displacement, infections** since you add Foreign body inside the patient (10%)
- Slower weight loss
- Requires close follow-up

🔷 3. Sleeve Gastrectomy

- **Vertical reduction** of the stomach into a **sleeve** shape (~25%)
- Single procedure – can be used standalone or **before bypass**

Pros:

1. No disconnection of intestines
2. No impact on vitamin absorption

Cons:

1. **Irreversible**
2. New procedure with less datش
3. Risk of **leak/bleeding** (<5%)

🔴 Malabsorptive Procedures

➡️ Bypass intestines to **prevent absorption** before mixing with digestive juices

🔷 1. Biliopancreatic Diversion

- **Horizontal subtotal gastrectomy to reduce oral intake** (gastric pouch here is **larger** than roux en y surgery)
- **Greater weight loss than Roux-en-Y**
- It's a **Roux-en-Y** anastomosis **with short common alimentary channel**
- risk of **leak** and **nutritional deficiency**

🔷 2. Duodenal Switch

- **Sleeve gastrectomy** + **diversion**
- Can be used **after sleeve gastrectomy**

🟠 Mixed Procedures (Gold Standard)

➡️ Combine **restrictive + malabsorptive** components

Pros:

1. **Faster and more weight loss**
2. **Better control of DM**
3. Reliable for **high BMI** patients

Cons:

1. Risk of **iron & calcium deficiency** (especially post-menopausal women)
2. B12 def. → tx by supplement
3. **Leak at anastomosis**
4. **Dumping syndrome** (after sugary or high-fat meals)
5. Inability to undergo normal GI exam (e.g., endoscopy)

• Disadvantage: 1) Iron, calcium (especially post-menopausal), B12 defiency – 3) Dumping Syndrome (after sweet and high fat diet) 4) unable

* Comparisons *

		Excessive weight loss	Diabetes remission	Mortality
Restrictive	Adjustable gastric banding	49.4%	62%	0.05%
	Sleeve gastrectomy	55.4%	70%	0.17%
Mal-absorptive	Bilio-pancreatic diversion	70-80%	98%	1.9%
Mixed	Roux-en-Y Gastric bypass	62.6%	83%	0.5%

→ Best surgery regarding wt loss and highest mortality